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# ANNUAL OUTLOOK ISSUE THE AGRICULTURAL SITUATION

NOVEMBER 1942

*A Brief Summary of Economic Conditions*

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**T**OTAL WAR DOMINATES the farm outlook for 1943. All production, farm and nonfarm, must help win victory. Prices will be determined less in the market place, more by governmental controls to obtain essential types of production and insure fair distribution of limited supplies. Military and lend-lease needs bulk large in the demand outlook and dominate the export situation. Factors usually of major importance in the outlook have been crowded aside by wartime problems of farm labor, transportation, storage, processing, building materials, machinery, and production supplies. Governmental programs for manpower, conservation, rationing, and economic stabilization will have a major influence upon these problems. They can and will be solved but not without a great deal of local initiative and local action. American soldiers and civilians will be adequately fed and clothed. Essential supplies will be carried to our allies. Farmers will work harder than ever before, and in return they likely will receive the greatest income in their history.

## FARM OUTLOOK FOR 1943

*IN keeping with the wartime situation, the agricultural outlook for 1943 lays greater emphasis than usual upon prospective food requirements and upon the outlook for production, processing, and transportation of agricultural commodities. Some of the reports in this issue have been condensed from speeches delivered at the annual Agricultural Outlook Conference in Washington.*

**DEMAND** The greatest demand ever known for farm products is in prospect for 1943. War needs of this country, of the United Nations, and of civilians call for a quantity of farm products which, for some commodities, will probably be in excess of agriculture's capacity to produce in 1943.

**MILITARY** and lend-lease purchases in 1943 may take nearly 20 percent of the Nation's food production, compared with about 13 percent this year and 4 percent in 1941.

By late 1943, Government spending for war may be at an annual rate of 100 billion dollars, compared to an October 1942 rate of 70 billions. Spending for war in 1943 will convert most productive resources to war purposes, leaving short supplies of all goods for civilians. Only about half the quantity of industrial commodities that civilians bought in 1941 will be available in 1943, and demand for such goods will be considerably more than supply.

Government expenditures for all war goods, including the products of factories and farms, will enlarge civilian incomes to the greatest on record. Although purchasing power will be cut down by war taxes and war savings, more purchasing power than goods will remain. Wage payments will be greater, due to increased employment, longer hours, and higher average earnings, and farm income will increase again over the record 1942 receipts.

**FOR FARMERS**, this demand situation should mean a ready market in 1943 for nearly all the products they have for sale, unless there are difficulties in processing and transportation now unforeseen. However, in view of the strong demand generally for agricultural products, it will be desirable for farmers to replace crops that require excessive amounts of labor or transportation in relation to their value in the war effort with crops more urgently needed and requiring comparatively little labor or transportation. In view of the stringent wartime controls on prices, production, and distribution of available supplies, demand naturally will have less than its usual effect on the relative profitability of any particular type of farm enterprise.

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**PRICES** Price trends during the remainder of the war will be determined more by governmental action than by the usual demand-supply relationships. This applies to prices received by farmers for the products they sell as well as to prices in wholesale and retail markets.

**RECENT** extension of price controls under the Act of October 2, 1942, providing for the stabilizing of the National economy brings under price ceilings, in wholesale and retail markets, over 90 percent of all foods included in the average family's food

budget. If wholesale and retail prices are effectively stabilized, it is reasonable to assume that further advances in the general level of prices received by farmers will not be large. Farm prices may average only 5 to 10 percent higher in 1943 than in 1942 compared with the average gain of 25 to 30 percent this year over last. Costs of transporting, processing, and marketing usually do not fluctuate as much as raw material prices so that the percentage changes in prices usually become smaller as the products get nearer to the ultimate consumer.

Prospective changes in demand-supply conditions in 1943 ordinarily would result in substantial further advances in prices all along the line—at the farm and in wholesale and retail markets. Consumers will have considerably more money to spend but, after military and lend-lease needs are met, the per capita volume of agricultural products available to civilians may be about the same as in 1942. There will be less—considerably less—industrial products for civilians in 1943 than in 1942, when both inventories and production of many consumer items were larger than they will be in 1943.

As the disparity between consumer income and available supplies of goods becomes larger (increasing income, diminishing supplies), the upward pressure on prices will increase. Rationing, increased personal taxes, and larger savings will minimize this pressure, but may not prevent some further rise in commodity prices unless the controls are further strengthened by subsidies or other measures. A few agricultural commodities (mostly fresh fruits and vegetables) and some services (especially professional services) still are not subject to price ceilings or other direct controls.

**F**OOD production generally has increased enough to meet war needs (military and lend-lease) and to leave more for the average civilian

consumer in 1943 than he consumed annually in the 1935-39 period. But consumer income has risen much more than food production during the year just ending. In relation to the 1943 outlook for consumer income there will be adequate supplies of cereals, citrus fruits, vegetables generally, and eggs. Poultry and fresh milk may also be available in sufficient quantities for all needs, dependent in part on the effects of shifts in demand resulting from shortages of some other foods. Meat presents the most urgent rationing problems at present, although other foods may need to be rationed later. Total meat supplies in 1943 will be of record size, but more meat probably will be needed next year than this year for military and lend-lease uses.

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**FARM INCOME** Net income of farm operators, this year the largest on record, is expected to be even larger in 1943.

**I**NCLUDING Government payments, net income in 1942 is forecast at nearly 9.8 billion dollars—approximately a billion dollars more than the previous record in 1919. This is 45 percent above 1941 income, and more than double the average from 1935 to 1939. Cash farm income from marketings in 1942 will be about 15 billion dollars, an increase of one-third over 1941 and nearly double the 1935-39 average. In 1919, it was 14.6 billion dollars. The increase in income in 1942 over 1941 is the result of a 25 percent rise in prices and a 12 percent increase in sales. Government payments will be about the same as in 1941, and will raise the total cash farm income in 1942 to around 15.6 billion dollars.

The net income from agriculture per person on farms this year will be about \$368 compared to \$254 in 1941. This is about 136 percent of parity income (the ratio of per capita farm income to per capita nonfarm income

in 1910-14). Net farm income was 112 percent of parity in 1941 and 100 percent of parity in 1935-39. In 1918 it reached the record height of 165 percent of parity.

Total production expenses of farm operators in 1942 are estimated at 8.7 billion dollars, an increase of more than 15 percent over 1941 and about 50 percent more than the 1935-39 average.

**A**SSUMING that prices next year average about the same as in September 1942, cash income from farm marketings in 1943 is forecast at approximately 16 billion dollars. Expenses have been tentatively estimated at between 9 and 9.5 billion dollars. This would leave a net income to farm operators in 1943 of between 10 and 10.5 billion dollars. The cash income forecast is based on an assumption that production of livestock and livestock products will be slightly larger in 1943 than it was in 1942; and the total volume of crops sold will be somewhat smaller.

## FARM LABOR

Agriculture, with the help of the weather but without the help of more workers than it had a year ago, was able to increase production substantially in 1942 by utilizing types of labor usually not in the farm labor force and by employing laborers more days per week and more hours per day. But now we are beginning to scrape the bottom of the barrel on the farm labor supply and it appears that to have sufficient farm labor next year will require more ingenuity not only on the part of farmer employers but also on the part of government.

**I**F present trends continue, agriculture probably will lose a million workers from its labor force between July 1, 1942 and July 1, 1943. By October 1, 1943, at the end of the harvest season, the prospective loss

will amount to 1,300,000 workers. At the same time, needed agricultural production next year would require 200,000 more workers than were available in 1942. To meet these needs to the full, next year we would have to recruit 1½ million new workers.

Perhaps public action can be taken to relieve some of the need for new workers. However, if agriculture has to recruit this many new workers, most of the likely sources are the following groups: (1) 250,000 farm boys reaching the working age of 14 years, in excess of deaths among men in the farm work force; (2) 50,000 reduction in unemployment on farms, mostly of older men and physically handicapped persons; (3) 700,000 more women to be employed, half of them to replace women already working in agriculture who will migrate into nonagricultural work and the other half as a net addition to the number of women working on farms; (4) 100,000 more nonagricultural workers who live on farms, to perform farm work in addition to carrying on their usual occupations; (5) 100,000 more children under 14 years of age; (6) 300,000 increase in town and city residents who work in agriculture.

**A**NOTHER important source of farm labor is the reservoir of underemployed farm operators, who because of limited land, limited operating capital, lack of knowledge, or for other reasons are producing very little for the market. The extent to which these operators are assisted to become more productive in 1943, either at home or in new jobs on other farms or in industry, will affect the farm labor situation materially. About 2 million farms, or one-third of those reported in the 1940 census reported gross incomes of less than \$400. About half of the production on these farms was consumed on the farm and on the average these farms sent only about \$100 worth of products to the

market. This third of the farms produced only about 3 percent of the marketed crops. There are also many underemployed farm operators in the middle third, those who reported gross incomes between \$400 and \$1,000, and who contributed only 13 percent of marketed crops.

Even though these groups contain a disproportionately large number of farm operators over 65 years old, and also many who spend most of their time at some nonagricultural job, it seems clear that between one-half million and one million of these operators might be assisted into more productive work either in agriculture or in industry. Should a part of these people be drawn into industry, to that extent fewer workers from the more productive farms would be needed in industry. If others were assisted in migrating to jobs on farms in more productive areas, farm labor problems there would be alleviated to a considerable extent. If at the same time those underemployed operators who remained were assisted through loans and supervision to operate the lands abandoned by their neighbors, it should be possible to keep agricultural production for the market at least as high, or even higher than before, in these poorer areas.

**G**OVERNMENTAL policies with respect to recruitment, deferment, transportation, housing, training, and wage rates for farm labor, setting and distributing production goals, and with respect to manpower allocation will all have an important effect on the farm labor situation in 1943. Specific details of many of these policies are now being developed. Nevertheless, one of the most important factors in the farm labor situation in 1943 will be the extent to which farmers organize for the efficient utilization of agricultural workers and of other persons in their localities who can be made available for seasonal farm work.

## PRODUCTION SUPPLIES

Farmers are being asked to produce a maximum output of food in 1943 with less labor, machinery, fencing, fertilizer, insecticides and containers than were available in 1942. Elasticity in the use of labor and machinery on family-sized farms will help them get the job done.

**N**EXT to labor, the most important shortage in 1943 is likely to be farm machinery. For 1942, manufacturers were limited to 83 percent of their 1940 production with a wide range in limitation on specific machines. The War Production Board has signed a limitation order for the year beginning November 1, 1942, providing for manufacture of machinery at a level equal to 20 percent of the average of 1940-41. Furthermore, in the past year there were large inventory stocks in dealers' hands and now there are none.

Temporary rationing of 18 machines is now being carried out by county rationing committees. It is contemplated that about four times that many items will be rationed for next year. The purpose is to prevent hoarding, and to try to get machines in the hands of farmers who can make the greatest use of them in food production. Fortunately, it is contemplated that machinery repairs will be available as needed, although the manufacture of repair parts may be subject to some delay.

**F**ENCING materials are even more scarce than new farm machinery. There are practically no stocks on hand. The War Production Board has approved a request for manufacture of 50 percent of the average roddage made annually in the last 5 years. This authorization is expected to run for the last quarter of 1942 and the first quarter of 1943. Lighter gage and simplified design will cut the weight of the fencing made by about one-third. Fencing will be rationed along with machinery.

**T**HE supply of phosphates and potash seems to be adequate for 1943. Triple superphosphate will be somewhat limited by lend-lease shipments, but if carefully handled it probably will meet the most essential needs. The War Production Board has limited the nitrogen content of grades of fertilizer which can be manufactured and has specified that no chemical nitrogen can be sold for nonessential uses such as lawns and golf courses, nor for fall-sown grains for harvest. Still further restriction may be desirable. At present it is contemplated that some 350,000 tons of oilseed meals will be diverted to fertilizer use. This would relieve the shortage considerably, but rationing in some form will be necessary.

Several months ago the War Production Board issued a limitation order designed to restrict use of critical building materials to types of construction that are essential to the war effort. Under the terms of this order a farmer may, without specific approval, make improvements to his dwelling costing not more than \$200, or he may expend during a 12-month period not more than \$1,000 on any other farm buildings. For any new agricultural construction beyond the specified exemptions, a farmer may file an application with his County USDA War Board.

**S**UPPLIES of several insecticides and fungicides will be tight, but with careful handling essential needs probably can be met. Only enough pyrethrum and rotenone will be available for the most essential agricultural uses. It will be imperative that sprays using copper, such as bordeaux mixture, be rigidly economized. The Secretary of Agriculture has approved a program to divert 25,000,000 pounds of tobacco for manufacture of nearly 2,000,000 pounds additional nicotine sulfate as a substitute for some other spray materials.

Even though they obtain less labor, supplies, and equipment in 1943, far-

mers can do a great deal to maintain maximum production by giving more feed and better balanced rations to the same number of livestock, by sharing machinery, by vigorous repair campaigns, by use of improved farming practices, and conversion to the most essential war crops.

## MARKETING AND TRANSPORTATION

**M**any drastic adjustments in the marketing and transportation of farm products appear to be inevitable in 1943. Rail traffic in 1942 is estimated to exceed traffic in 1941 by 30 percent for freight and 50 percent for passengers. There may be a further increase of as much as 15 percent in total rail traffic in 1943. Agricultural traffic is expected to be somewhat larger than it was this year. The prospects for moving all of this larger traffic in 1943 are not bright. While the car supply situation is tight, the locomotive outlook is even more unsatisfactory. Inability of railroads to obtain maintenance and repair material increases the gloom of the picture. The situation will become worse as peak traffic conditions are encountered in the fall of 1943. If shortages should materialize in the period ahead in spite of all efforts to utilize cars and locomotives fully, shippers and travelers should be prepared for a system of priorities which might bar certain traffic from the railroad altogether. Motortrucks probably will not be able to haul as much traffic next year as they did this year. A considerable proportion of farm trucks may be out of operation altogether by the end of 1943.

**T**RANSPORTATION facilities for moving livestock to be marketed in the fall and winter of 1942-43 apparently will be adequate. But in view of an expected increase in livestock marketings, the problem of providing adequate transportation for livestock may be acute in the winter

of 1943-44. The aggregate transportation load for livestock is customarily heaviest in October when cattle and sheep are moved from western ranges in relatively large numbers.

Livestock trucks can be conserved through any of the following methods: (1) Enforcing a more efficient pick-up service in the country so as to require less travel to complete loads; (2) minimizing cross-hauling; (3) using small trucks for assembling livestock from farms for delivery to appropriate points, where transfer is made to larger trucks or railroads for transportation to markets; (4) limiting pick-up service in a community to one or a few days per week; (5) establishing truck associations in communities where they can transport livestock more economically than private truckers; (6) avoiding the unnecessary intermarket movements of livestock, and (7) insuring capacity loads for livestock trucks and return loads from market.

Available data indicate there will be no over-all shortage of processing facilities for livestock in the winter of 1942-43. Killing facilities are fully

adequate, but chilling and storage facilities are only barely sufficient in some areas. There will be an even heavier movement of livestock in 1943-44 if production goals are met next year. Some means of insuring an orderly market movement may be necessary.

A shortage of materials for making cans threatens to reduce greatly the volume of fruits and vegetables to be canned in 1943. In addition, military and lend-lease requirements will absorb a large part of the available supply of some canned products, as well as of dried fruits. To make up for the shortage of canned fruits and vegetables, some increase in other forms of processing may be obtained, principally packing in glass and freezing; and a larger proportion of these products may be marketed fresh. Any such program should be planned with the possibility in mind that there may be a shortage of refrigerator cars in 1943-44. Foods which have a high nutritional value in relation to their bulk may be given preference in trans-

### Prices of Farm Products

[Estimates of average prices received by farmers at local farm markets based on reports to the Bureau of Agricultural Economics. Average of reports covering the United States weighted according to relative importance of district and State]

	5-year average, August 1909-July 1914	October average, 1909-13	October 1941	Septem- ber 1942	October 1942	Parity price, October 1942
Wheat (bushel).....cents..	88.4	88.1	91.0	102.6	103.5	136.1
Corn (bushel).....do..	64.2	64.8	64.9	82.6	77.5	98.9
Oats (bushel).....do..	39.9	38.4	38.9	43.3	43.2	61.4
Rice (bushel).....do..	81.3		96.7	154.4	139.6	125.2
Cotton (pound).....do..	12.4	12.1	<sup>1</sup> 67.6	18.59	18.87	19.10
Potatoes (bushel).....do..	69.7	65.0	16.55	107.7	102.5	<sup>1</sup> 110.4
Hay (ton).....dollars..	11.87	11.49	8.34	9.03	9.39	18.28
Peanuts (pound).....cents..	4.8	4.6	4.41	5.69	5.77	7.39
Apples (bushel).....dollars..	.96	.72	.87	1.20	1.14	1.48
Hogs (hundredweight).....do..	7.27	<sup>1</sup> 7.34	10.13	13.57	14.11	11.20
Beef cattle (hundredweight).....do..	5.42	<sup>1</sup> 5.30	9.14	11.17	11.36	8.35
Veal calves (hundredweight).....do..	6.75	<sup>1</sup> 6.81	11.06	13.00	13.02	10.40
Lambs (hundredweight).....do..	5.88	<sup>1</sup> 5.37	9.83	11.92	11.84	9.06
Butterfat (pound).....cents..	26.3	26.8	<sup>1</sup> 36.5	42.9	46.5	<sup>1</sup> 41.8
Chickens (pound).....do..	11.4	11.5	16.0	20.3	19.5	17.6
Eggs (dozen).....do..	21.5	23.8	31.8	34.7	37.4	<sup>1</sup> 42.0
Wool (pound).....do..	18.3	18.5	<sup>1</sup> 36.2	39.7	39.7	28.2
Tobacco:						
Flue-cured, types 11-14 (pound).....do..	<sup>4</sup> 22.9		32.8	37.0	42.4	28.4

<sup>1</sup> Revised.

<sup>2</sup> Post-war base.

<sup>3</sup> Adjusted for seasonality.

<sup>4</sup> Base price crop years 1934-38.

portation over foods of low nutritional value when the transportation shortage becomes severe.

**O**ILSEED crushing plants are located principally on the east and west coasts, in the cotton South, and near some large centers of consumption. This is primarily the result of the fact that until recent years cottonseed and some flaxseed were the only domestic oilseeds produced in sufficient quantities to be of any great commercial importance. Construction of new processing and storage facilities will be difficult if not impossible in view of the shortage of strategic materials. Therefore, it will be necessary to move a large quantity of soybeans and other oilseeds to distant mills.

A study of the keeping qualities of the different oilseeds at various stages in their processing has led to the suggestion that it may be desirable that cottonseed should be crushed first, and that soybeans, in excess of the quantity that can be processed locally, should be stored as beans in the North Central region to the extent that storage capacity is available on farms or in elevators. Peanuts, already located in the South, can be crushed as desired.

The general outlook for marketing and transportation in 1943 and as long as the war lasts points to the need for vigorous action by producers, middlemen, consumers and Government agencies to anticipate bottlenecks and find a solution before they become severe.

**D**ESPITE increases in wages and some other costs of doing business, marketing margins for foods have not changed much since the outbreak of the war, and have remained well below normal in relation to the level of prices and costs. Over-all margins on cotton products have increased, and are near normal in relation to the level of prices and costs. The big increase in consumer expenditures for many important foods has been passed back

in full to the farmer in the form of higher prices, whereas most of the increase in consumer expenditures for cotton products has been taken up by the marketing system in the form of higher charges. Only in the last few months has an appreciable increase in marketing margins for foods been apparent, but there are indications that this trend may continue into 1943. Cotton margins are not expected to change much from current levels.

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**LIVESTOCK** Livestock production has expanded rapidly in the United States during the past few years. Several all-time high records for the production and marketing of meat animals were established in 1942, and even greater marketings are in prospect for 1943. It is now estimated that the combined output of beef, veal, pork, lamb, and mutton in 1942 will total close to 23 billion pounds, and that total production of these meats in 1943 may exceed 24 billion pounds. These figures compare with the 1935-39 average production of only a little over 16 billion pounds.

**D**ESPITE the high level of meat production, total supplies are not large, relative to our total wartime requirements. Military and lend-lease needs are absorbing most of the increase in production that has occurred during the past 2 or 3 years, while civilian demand for meats also has expanded greatly as a result of the increases in employment and advances in wage rates that have taken place. For the year beginning October 1, 1942, military and lend-lease requirements for meats are estimated at approximately 6½ billion pounds. This leaves roughly 17½ billion pounds available for civilian consumers. On a per capita basis this supply will almost equal the high 1941 rate of consumption of a little more than 140 pounds per person, but it will fall 10

to 15 pounds short of the amount of meat which civilians would like to buy at ceiling prices.

To make certain that sufficient meat will be available for military and lend-lease uses during coming months, the Office of Price Administration recently has placed restrictions upon the distribution of meats to civilian consumers. For the last 3 months of 1942, commercial meat packers are required to limit deliveries of meats into civilian consumption to the following percentages of such deliveries in the last quarter of 1941: Beef, 80 percent; veal, 100 percent; pork, 75 percent; lamb and mutton, 95 percent. At the same time, consumers are being urged to voluntarily restrict their consumption of meats to a weekly average of 2½ pounds (retail weight basis) per adult. This amount of meat, if equitably divided among consumers, will be adequate for good nutrition. Formal rationing of meats probably will be instituted by the Office of Price Administration early in 1943.

**H**OG producers this year are raising the largest pig crop on record—105.5 million head. This is 20 million head more than were raised in 1941 and 27 million more than the average annual pig crop of the 10 years prior to the 1934 drought.

Secretary Wickard has asked farmers to plan for a 10 percent increase in their 1943 spring farrowings, and to market their hogs 10 pounds heavier than they did in 1942. If these production increases are attained, the total output of pork in 1943 may exceed 13 billion pounds, dressed weight, compared to about 11 billion pounds in 1942.

In spite of somewhat larger than average death losses from the 1942 pig crop, total hog slaughter in the 1942-43 marketing year (October-September) may reach nearly 95 million head, and the number slaughtered under Federal inspection may total 65 or 66 million. Inspected hog slaughter in the marketing year

just completed (through September 1942) totaled 52.4 million head.

The usual fall increase in hog marketings is now under way. Because this year's spring pig crop was 25 percent larger than that of 1941, the number of hogs to be marketed during the 1942-43 fall and winter season (October-April) is expected to be 9 or 10 million head greater than it was a year earlier. If marketings follow about the usual seasonal pattern, the number of hogs marketed for slaughter at Federally inspected plants during December and January may exceed a monthly rate of 7.5 million head in one or both of these 2 months. The largest number of hogs slaughtered in any other month of record was 6.6 million head in December 1924. Although packing plants in the past always have been able to handle any number of hogs that have come to market, wartime conditions may have prevented processors from fully making the adjustments needed to handle the prospective large run of hogs this winter. For this reason the Department of Agriculture urged farmers to fatten out their early spring pigs as rapidly as possible for market before Thanksgiving. It also recommended that farmers carry late spring pigs beyond the December-January peak period. In addition, plans for marketing control measures are being worked out—to be applied if congested market conditions should develop.

The upward trend in hog prices which began in late 1940 has been halted by the establishment of ceiling prices for hog products. Maximum wholesale prices for pork became effective in March, but because of the strong competition between packers for the limited supply of hogs, prices for live hogs advanced further after that date. This resulted in materially reduced packers' margins and the threat that many small packers might be forced to go out of business. All packers are needed to handle the large number of hogs that will be marketed

during the coming year, and the Department of Agriculture has made plans to assist processors who have been caught in the so-called "small packer squeeze." The peak price for hogs reached at Chicago during the past summer was \$15.75, the highest price in 22 years. The 1942 average price received by farmers for hogs will be about \$12.75, compared with \$5.40 in 1940. The Office of Price Administration has indicated that ceiling prices for live hogs may be established in the near future. Because of the strong demand for hog products, prices for hogs in 1943 probably will remain at or near the highest prices permitted by the ceilings.

**C**ATTLE numbers had reached an all-time high at the outbreak of the current war. Cattle numbers tend to fluctuate in cycles of around 15 years in length. The most recent low point in the cattle cycle occurred in 1938, following several years of heavy liquidation caused by the 1934 and 1936 droughts. Since then breeding herds have been built up rapidly by the withholding of cattle and calves from slaughter. On January 1, 1942, our total cattle and calf population amounted to 74.6 million head, slightly more than the previous peak number reached in 1934 and a new high record. But cattle numbers have been built up further during the year that is nearly ended, and numbers on January 1, 1943, probably will be at least 1 million head greater than a year earlier.

Whether or not cattle numbers will increase further during 1943 will depend upon several factors, among which will be weather and feed conditions next year. Some increase in cows kept for milk is expected, and if range conditions are favorable in the Western States, continued holding back of breeding stock may take place in some areas where numbers are still below the 1934 peak. In the Corn Belt, where cattle numbers are at much the highest level on record and where hog production has increased sharply, little

further increase in cattle numbers is expected. Cattle numbers have now increased to the point at which slaughter can be stepped up sharply without causing a reduction in breeding herds. During the current year, cattle and calf slaughter will total close to 28 million head. This is about 2 million head more than in 1941. Cattle and calf slaughter in 1943 could total about 30 million head without cutting into breeding herds. And in addition, a moderate liquidation of cattle numbers could take place without jeopardizing a continued high level of beef and veal production.

Ceiling prices were established by the Office of Price Administration for beef and veal in April. Cattle prices have fluctuated considerably since then, with prices of the lower grades of slaughter cattle tending to advance relative to the upper grades. Strong competition between packers and cattle feeders also has supported feeder cattle prices at relatively high levels. The relationships between prices of feeder cattle, fat cattle, and feeds during the early fall have been moderately favorable for cattle feeding, however, and the number of cattle fed during the 1942-43 feeding season again may be large. Shipments of feeder cattle to the Corn Belt during the 3 months July-September totaled 9 percent larger than a year earlier, despite some reports that price regulations have been unfavorable for cattle feeding.

**S**HEEP production has increased rapidly in the United States during the past several years. The total number of sheep and lambs on farms and ranches at the beginning of 1942 totaled 56.0 million head. This year's lamb crop was slightly smaller than the record large 1941 crop, however, chiefly as a result of unfavorable weather at lambing time. Marketings of sheep and lambs for slaughter so far in 1942 have totaled about 10 percent greater than a year earlier. A large part of this increase has been in ewe lambs and sheep, and it appears

that some liquidation of breeding stock is under way, reflecting a shortage of sheep herders in Western States. The total number of sheep and lambs on farms and ranches at the beginning of 1943 may be smaller than the record large number on hand a year earlier. Lamb and mutton constitute roughly 5 percent of our total meat supply.

## POULTRY PRODUCTS

**Production of poultry and eggs in the United States in 1943 is likely to surpass the record output of 1942. Prices for the year as a whole will average higher than in 1942 and cash farm income from poultry and eggs will establish a new high record. Some further increase in feed-grain prices is in prospect for the coming year but the extent of increase will be limited by large supplies of feed including feed wheat.**

**T**OTAL egg production in 1943 probably will be from 6 to 8 percent larger than this year's output because of increases in numbers of layers. The rate of production per hen is likely to continue at about the 1942 level. Egg production in September was 11 percent larger than a year earlier and total output in 1942 will be 14 or 15 percent larger than in 1941. Wholesale egg prices at Chicago in early November were from 10 to 25 percent higher than a year earlier.

A further increase in chicken meat production is likely next year. Supplies per capita will be by far the largest on record. With a favorable egg-feed price ratio in prospect, the number of chickens raised to obtain pullets may be even greater in 1943 than in 1942. Also, a considerable number of out-of-season chicks probably will be raised on general farms to produce additional meat supplies. On September 16 the Secretary of Agriculture recommended the hatching and raising of chicks this fall to augment meat supplies in coming months. Commercial broiler production prob-

ably will continue at a more nearly constant level during 1943 than ever before, since prices are likely to be favorable throughout the year. Feed wheat and soybean meal will be available in large quantities to support increased chicken production. Total marketing of chickens from general farms in 1942 will be 16 to 18 percent in excess of the 1941 volume, with much of the increased quantity coming in the last quarter of the year.

Supplies of turkey this fall will be about as large as last fall and prices will continue to be materially higher than they were a year ago. Turkey production in 1943 may be larger than this year. Supplies of feed are large and the turkey-feed price ratio has been favorable for producers.

## DAIRYING

**Dairy production in 1943 will be at about the same volume as in 1942; military and lend-lease requirements will be much larger. Therefore there will be less dairy products per capita available for civilian consumption—perhaps the least in two decades.**

**A**LTHOUGH the relation between prices of dairy products and prices of feed was considerably less favorable to dairymen in 1942 than in 1941, milk production was increased 4 percent. Cow numbers increased 3 percent and production per cow about 1 percent. However, military, lend-lease, and consumer demand has expanded more rapidly than production, and stocks of dairy products at the end of the current year probably will be about 35 percent smaller than they were at the beginning. For 1942 as a whole, butter production may average about 1 percent smaller than in 1941, but production of cheese may be increased by 20 percent, condensed and evaporated milk 10 percent, and dried skim milk for human consumption over 50 percent.

Military and lend-lease requirements for milk and dairy products will be materially larger in 1943 than they were in 1942. Under present ceiling prices, consumers if unrestricted would use a part of their prospective increase in income to buy slightly more milk and milk products per capita than in 1942. Under present conditions, a desirable carry-over for essential working stocks at the end of 1943 would be 5 billion pounds, milk equivalent, compared with 3½ billion pounds at the end of 1942 and a 1936-40 average carry-over of 3 billion pounds. This assumes a maintenance of Government stocks at a level equivalent to several months' lend-lease requirements and of civilian stocks at 1935-39 average levels.

**P**ROSPECTIVE total milk production on farms in 1943, without special incentives to producers, is estimated at 120 billion pounds, the same as in 1942. This assumes about 2 percent more cows on farms than in 1941 but about 2 percent less production per cow. Although farmers probably will increase their rate of culling because of the shortage of labor, high beef prices, and ample replacement stock, the record large number of 1- to 2-year-old heifers on farms this year may result in an increase of 1 to 3 percent in the number of milk cows on farms in 1943.

Higher feed prices, continued strong competition from hogs and beef cattle, and the probability of average pasture conditions in 1943 compared with unusually favorable pastures in 1942, are the principal factors pointing to decreased milk production per cow. Dairy prices in 1942 were related about normally to feed prices, but were materially below normal in relation to hog prices. The disparity with respect to hog prices is expected to continue in 1943. Moreover, feed prices probably will increase relative to dairy prices. On the other hand, record or near record supplies of feed

grains and hay per animal unit and roughly 5 percent higher dairy-product prices than in 1942 will help to retard the expected decrease in milk production per cow.

**S**TOCKS of dairy products at the beginning of 1943 are expected to total about 3½ billion pounds milk equivalent. With a prospective production of about 120 billion pounds, the supply of milk for human consumption in 1943 will total approximately 123½ billion pounds, compared with 125½ billion pounds in 1942. This is materially less than the estimated requirements. The deficit may be met by restricting civilian consumption of dairy products or in part by increasing the consumption of skim-milk products. To attain a production of more than 120 billion pounds of milk, subsidies probably would be needed to offset the relatively high prices of feed, hogs, and beef cattle, and to meet increasing farm wage rates.

If no special incentives are offered producers, civilian consumption of milk and milk products in 1943 may be reduced to about 775 pounds per capita, milk equivalent, the lowest in two decades. Per capita consumption was 838 pounds in 1942, and an average of 811 pounds annually in 1936-40. Even if the greatest possible production of milk were attained, civilian supplies would be several billion pounds less than consumers would purchase at the prospective level of prices and income. Hence, even with maximum production, restrictions probably will need to be placed on domestic consumption of milk or milk products.

Over 30 billion pounds of skim milk are fed to livestock on farms annually. Although only a part of this would be available for human consumption, the use of various skim-milk products probably will be increased as the impacts of the milk situation are felt by consumers. The principal skim-milk

products of which consumption might be increased in 1943 are roller-process dried skim milk for use in cooking, cottage cheese, cultured buttermilk, flavored milk drinks with a low butterfat content such as chocolate drink, and fluid skim milk. Skim milk contains all of the nutritional elements of whole milk except butterfat and vitamin A.

Cash farm income from dairy products increased 25 percent between 1940 and 1941, and may have increased by an additional 20 to 25 percent in 1942. In both of these years, production and prices were increasing. However, in 1943 production may show no increase unless special incentives are offered producers. Under price ceilings, cash farm income from dairying in 1943 may be only about 5 percent higher than it was in 1942.

**FEED** Record supplies of feed grains, high-protein feeds, and forage crops are available for the 1942-43 feeding season. The larger numbers of livestock on farms in 1942-43 are expected to require about 10 percent more feed than in 1941-42. But even after allowing for the greater requirements of livestock, the entire feed situation is as good as, if not better than, a year ago.

**T**HE October 1 supply of feed grains (including the corn supply and stocks of oats October 1, and production of barley and grain sorghums) is 11 percent larger than last year and slightly larger per grain-consuming animal unit on farms. The corn supply is estimated to be 3,624 million bushels, more than 300 million bushels greater than in 1941. Corn, oats, and barley supplies are all the largest on record. In addition to a larger supply of feed grains, more wheat will be available for livestock feed.

Larger total supplies of high-protein feeds in 1942-43 will allow the feeding of more nearly balanced rations than in any previous year, especially in the

Corn Belt, but producers of hogs and poultry will need to feed more oilseed meal to replace limited supplies of animal protein feeds. About 35 percent more oil cake and meal is in prospect for 1942-43 than was available in 1941-42. The total quantity of protein byproduct feed from the packing industry, plus fish meal and skim milk, on the other hand, is expected to be no larger than last year, and the smallest in recent years in relation to the number of livestock consuming these feeds.

The supply of hay for 1942-43 is 9 percent larger than the 1941-42 supply and about 6 percent larger per hay-consuming animal unit. Hay supplies are ample for the increasing number of livestock in nearly all areas. The harvested acreage of hay is 72.7 million acres, the largest since 1924. Hay acreage in 1943 may be reduced slightly from 1942, since in some areas there will be a shift from hay crops to feed grains to provide concentrates for the increasing number of hogs and poultry.

**D**URING 1941-42 livestock consumed 10 percent more concentrates than in 1940-41. Livestock production will continue to expand during the coming year and the quantity of feed consumed in 1942-43 probably will be increased by another 10 percent. However, the 1942 production of feed grains that was indicated October 1 appears to be about sufficient to meet this heavy utilization, without reducing the quantity of feed grains carried over at the close of the 1942-43 season.

With continued strong demand for feed in prospect, the total acreage planted to feed grains in 1943 is expected to be larger than in 1942. Production of feed grains next year, however, probably will be smaller than this year when yields were exceptionally high. With yields per acre about the same as the 1937-41 average and with a moderate increase in acreage, the total production of

four feed grains would be somewhat smaller than in 1942. Livestock production in 1943-44, on the other hand, probably will be greater than in 1942-43. Thus, a reduction in reserve stocks of feed grains is in prospect during the 1943-44 marketing season. A considerable increase in the quantity of wheat fed to livestock in 1943-44 also may be necessary.

Feed grain prices have risen 20 percent during the past year and about 75 percent since the beginning of the war, reflecting the strong demand for feed. Livestock prices have advanced more than feed prices since the war started, making feeding ratios more favorable to livestock producers. The strong demand for feed may cause feed prices to advance further in 1943, unless subsidies or other means are used to hold them at present levels. Advances in feed grain prices in the early part of 1943, in any event, will be limited by the large supplies of all feeds available, by the feed-wheat program, and by price ceilings on feeds and livestock products. Prices of oil meals will be low during 1942-43 relative to prices of tankage, meat scraps, and fish meal.

## FOOD GRAINS

Supplies of food grains in 1943-44 are expected to be fully ample to meet all requirements. Following the record and near-record crops in 1942, large carry-over stocks are expected at the beginning of the 1943 marketing year. The 1942 wheat crop was the second largest on record (in spite of a substantial reduction in acreage), the rye crop was the largest since 1922, and the rice crop set an all-time record.

**I**F total wheat seedings for the 1943 crop are approximately equal to the national allotment of 55 million acres and average yields are obtained, production will total about 650 million bushels. Some increase in the quantity used for food and a substantial increase in nonfood uses may result in

a total domestic disappearance of about 800 million bushels of wheat in 1943-44. This is equal to the estimated carry-over July 1, 1943. Therefore, the quantity available for export in 1943-44 and carry-over July 1, 1944, would be approximately equal to the size of the new crop.

It is expected that the acreage actually seeded for the 1943 wheat crop will be somewhat below the national allotment. However, this may be more than offset by better than average yields, resulting in a crop larger than 650 million bushels. There is abundant moisture in the soil this fall in the winter wheat States. Unless yields are considerably above average, the large domestic disappearance expected would cause supplies to be reduced and the domestic storage situation to be improved in 1943-44.

**E**VEN though the carry-over stocks of rye at the beginning of the 1943-44 marketing year will be large, little reduction from the 3,870,000 acres harvested in 1942 is expected. A review of the acreages in the States in which some reduction may take place indicates the possibility of a reduction to about 3,700,000 acres. Assuming a yield of 11.2 bushels (the 1930-39 average), a production of 41 million bushels would be indicated. This would be less than likely disappearance. As in the case of wheat, however, yields may be higher than average because of the abundance of moisture in the soil. If it is assumed that the crop will largely take care of the disappearance in 1943-44, which will probably be considerably larger than average as a result of increased feed use, the carry-over at the end of 1943-44 may still be large because of the large stocks at the beginning of the year.

**T**HE acreage seeded to rice in 1942 totaled 1,480,000 acres. This was an all-time record. With labor and equipment shortages, a somewhat smaller acreage may be seeded in 1943.

If 1,400,000 acres are seeded, and the yield is 48.4 bushels (the 1938-42 average), a crop of about 68 million bushels will be obtained. On the basis of present prospects, the carry-over at the beginning of the 1943 marketing year may total about 6 million bushels. Total supplies, accordingly, may be about 74 million bushels. While a supply of this size would be slightly larger than the record of 72 million bushels in 1942-43, it is expected that the disappearance will be so large that only about an average carry-over may remain at the end of the 1943-44 marketing year.

On the basis of present prospects, wheat and rice prices in 1942-43 are expected to average higher than in 1941-42. If the wheat supply situation is improved in 1943-44, prices may average higher than in 1942-43. Rye and rice prices possibly may average not much different from those in the current 1942-43 year.

**FATS AND OILS** Production of fats and oils from domestic materials is expected to total nearly 12 billion pounds in 1943 compared with about 10.6 billion pounds in 1942, 9.4 billion pounds in 1941, and an average of 7.8 billion in the 5 years, 1936-40. Animal fats and vegetable oils probably will share about equally in the increase from 1942 to 1943. Vegetable oils will constitute over 4 billion pounds of the total in 1943. A record production of vegetable oils from domestic oilseeds seems assured by the large supplies of oilseeds that will be available for crushing from the unprecedented 1942 crop. Production of lard, tallow, and greases is expected to show further gains mainly as a result of increased hog and cattle slaughter.

**PRODUCTION** of vegetable oils in the 1943-44 crop year, may be somewhat less than in 1942-43. Oilseed yields per acre were unusually high in 1942, and the very favorable weather conditions of this year prob-

ably will not be repeated in 1943. Animal-fat production in 1943-44, however, may show some further increase, particularly if the pig crop is larger in 1943 than it was in 1942. It may be possible, therefore, to maintain a 12-billion pound rate of fat production well into 1944 unless the weather is unusually bad during the 1943 growing season.

Requirements for fats and oils from domestic materials will be larger in 1943 than ever before, reflecting the loss of imports of coconut, palm, and tung oils from the Far East and the large exports of lard and domestic vegetable oils to be made under lend-lease. The United States recently has shifted from a net importing to a net exporting basis for fats and oils.

To provide a strategic reserve supply of primary fats and oils against contingencies such as an unexpected increase in lend-lease requirements or poor crops in 1943 or later, the War Production Board issued an order in September restricting the use of primary fats and oils by major manufacturers to specified percentages of the 1940-41 average use. The manufacture of butter and lard is not affected by the order. The use of fats and oils in the manufacture of edible products for military use and all products for lend-lease also is unrestricted. Factory and warehouse stocks of fats and oils, which have declined in the past 2 years to less than 2 billion pounds, are expected to be built up to about 3 billion pounds in the next 10 or 12 months. An additional 300 or 400 million pounds of oil probably will be held in reserve in the form of uncrushed soybeans.

The per capita supply of food fats and oils for civilian use in 1943 probably will be about as large as the average for recent years. But with industrial employment and income increasing, and with retail price ceilings in effect, the quantity demanded may be moderately larger than the available supply. A con-

siderable reserve exists, however, in wasted meat fat, much of which could be recovered in the kitchen for use in cooking.

**T**HE index of wholesale prices of 8 leading domestic fats and oils rose about 15 percent from September 1941 to September 1942, reaching 101 percent of the 1924-29 average in the latter month. Advances of about 20 percent in butter, lard, and linseed oil accounted for most of this rise. With the extension of price controls to butter early in October 1942, wholesale and retail prices of all fats and oils except linseed oil were covered by ceiling orders, and advances in prices of fats and oils after October 1942 and in 1943 probably will be relatively small. Linseed oil prices probably will not advance materially, as comparatively large supplies of flaxseed are available and requirements for paint oils probably will decrease in 1943 with a declining rate of building activity. Strong consumer demand is likely to keep prices of other fats and oils at or near ceiling levels.

Demand for fats and oils from domestic materials is likely to continue strong into the 1943-44 crop year. Demand for oil meal is also likely to continue at a high level as a result of a large number of animals on farms and a large output of livestock products. These factors will tend to keep prices of oilseeds of the 1943 crop at a high level, but price controls may prevent any major increases over prices for the 1942 crops.

**U**NDER arrangements made with the Commodity Credit Corporation, crushing mills have agreed to pay not less than certain specified prices for cottonseed, soybeans, and flaxseed produced in 1942. These support prices will result in a United States season average price to growers of about \$47.50 per ton for cottonseed. Prices to growers for soybeans will range from \$1.40 per bushel for brown

and black beans of low oil content to \$1.60 per bushel for green and yellow beans of high oil content, with discounts for beans grading under No. 2. As the great majority of the beans produced will be of the high oil-content type, the season average price for the United States probably will be between \$1.55 and \$1.60 per bushel. Support prices for flaxseed are on the basis of \$2.40 per bushel at Minneapolis. In addition to the arrangements with crushers, loans are being made to farmers on flaxseed. These measures probably will result in a season average price of about \$2.25 per bushel to farmers for flaxseed. The Agricultural Marketing Administration has guaranteed minimum prices for peanuts for oil averaging about \$80 per ton to growers, but prices actually received probably will average somewhat higher, reflecting Government support prices for peanut oil and peanut meal.

**L**ARGE acreage goals were set for oilseed crops in 1942. Farmers were asked to plant 4.5 million acres of flaxseed, to harvest 9 million acres of soybeans for beans, and to pick or thresh 5 million acres of peanuts. These acreages were 34, 54, and 150 percent, respectively, greater than the corresponding 1941 acreages. The goals for flaxseed and soybeans have been surpassed. Farmers planted nearly 200,000 more acres of flaxseed than requested, and it is indicated they will harvest nearly 2 million more acres of soybeans for beans than asked for. Although the indicated acreage of peanuts picked and threshed falls about 800,000 short of the goal, it is more than double the 1941 acreage and represents the greatest percentage increase over 1941 for any oilseed crop.

Twenty-four million acres of cotton were planted in 1942, 4 percent more than a year earlier. Production of cottonseed is indicated to be 25 percent greater, however, as a result of a record yield per acre.

**FIBERS** War in 1942 cut off silk imports and made it difficult to import wool, hemp, jute, and flax. War needs increased the demand for synthetic fibers, principally rayon and nylon, at the same time that shortages of strategic materials and labor made it difficult to increase the manufacture of textiles of all sorts.

An abundant supply of domestic cotton remains—particularly in view of the large crop this year. The net effect is that farmers are assured a good demand for high grade and long-staple cotton in 1943; moreover, farmers probably will continue to have difficulty in obtaining adequate supplies of sacks, twine, and similar supplies in 1943.

**COTTON** farmers are now selling their 1942 crop for the largest returns since the 1920's. The October farm price of lint was 18.87 cents, the highest for October since 1927 but less than the April and May prices of 19.03 and 19.17 cents, respectively. At this price the value of lint would be about 1,304 million dollars this season, the highest since 1927 and 43 percent above 1941-42.

The domestic supply of American cotton this season is estimated at about 24.0 million bales compared with 22.6 million last season and a 1936-40 average of 22.2 million bales. The increase over last season is attributable to the sharp increase in production (about 13.6 million bales compared with 10.6 million last season) more than offsetting the decline in carry-over of 1.6 million bales. The carry-over contained more high-quality cotton than was generally expected but the new crop is averaging shorter in staple than last season.

The increase in consumption which began in 1940 continued until a peak of 999,749 bales was reached in April 1942, a level equivalent to an annual rate of 11.9 million bales. Consumption has since ranged from 5,000 to

75,000 bales below the April record. Many mills are operating virtually at capacity and it is becoming more and more difficult to recruit additional labor. However, total domestic consumption may be about 11.6 million bales compared with last season's record of 11.2 million. Despite this increase in consumption the carry-over on August 1, 1943 will be larger than at the beginning of this season.

**WHERE** practicable, producers of short-staple cotton are urged either to shift to varieties having a staple length longer than 1 inch or to shift to other crops for which the need is greater. The wide premiums and discounts now prevailing will encourage this shift.

Production of American-Egyptian cotton is currently estimated at about 96,000 running bales which, with a carry-over of about 25,000 bales, gives a prospective supply of 121,000 bales, enough to last domestic mills until January 1, 1945, at the May-September average consumption of 4,383 bales per month. Consumption of American-Egyptian cotton may be held down somewhat during the next few months by the increased use of imported Egyptian cotton which has recently been underselling American-Egyptian cotton at New England mill points by as much as 8 cents per pound. However, total consumption of extra-long staple cotton this season probably will be sufficient to include most available imported Egyptian cotton and more American-Egyptian cotton than the 47,000 bales consumed in 1941-42.

The Arizona farm price remained between 39.7 cents and 41.0 cents per pound from mid-April through mid-September, but an increase of 3.5 cents per pound in the Government purchase price caused the farm price to advance to 44.0 cents on October 15. This compares with a range of from 29.8 cents to 32.2 cents during the corresponding period last year.

**W**OOL shorn this year is bringing farmers the highest prices since 1925, and cash farm income from sale of wool in 1942 probably will exceed 150 million dollars, a new record high. With prices for most wools close to the ceilings, it is unlikely that prices in 1943 will show much change from current levels.

The quantity of wool shorn or to be shorn in 1942 is expected to establish a new record of about 392 million pounds or slightly above 1941 and 30 million pounds above the 1936-40 average. In addition, the production of pulled wool is expected to be about the same as the 1941 total of 66 million pounds.

The carry-over of wool into 1943 will be large but stocks will consist mostly of imported wool held as a Government stock pile. Domestic growers are assured an outlet for the entire 1942 clip by Army orders for fabrics requiring the use of 100 percent domestic wool.

Mill consumption of apparel wool totaled 700 million pounds (grease basis, shorn and pulled) in the first 8 months of 1942, a gain of 15 percent over the corresponding period last year. A continuation of this rate will carry consumption for the calendar year above 1 billion pounds for the first time on record. Consumption of apparel wool for civilian purposes has been sharply curtailed, but this decline has been much more than offset by the increased military demand. Current levels are expected to be about maintained in 1943.

Wool production next year may be slightly below the 1942 record level of about 460 million pounds (grease basis, shorn and pulled). The large slaughter of sheep and lambs in 1942 may reduce the number of sheep to be shorn while military requirements for shearing pelts may result in a smaller production of pulled wool.

**M**OHAIK was less in demand after the discontinuance of automobile manufacture since about 65 percent of

the mohair formerly consumed was used in pile fabrics for automobile upholstery. Consequently, prices so far this year are reported to have been below those of 1941 when the average farm price was 57 cents per pound.

The outlook for mohair prices in the 1943 season depends to some extent upon the demand for mohair for civilian uses, particularly apparel fabrics, since it is not used extensively in military fabrics. More mohair is expected to be used in men's summer suits and heavy coatings as a result of restrictions on the manufacture of apparel wool for civilian use.

Stocks of mohair in August totaled about 19 million pounds and were held mostly by country buyers. The fall clip now being shorn is estimated at about 8 million pounds and total production this year may be about 21 million pounds. Demand for the fall clip is likely to be slow until mills replenish their stocks.

**H**EMP production is being encouraged to relieve a threatened shortage of rope and twine. About 37,000 acres of hemp were planted for seed in Kentucky in 1942. This acreage is expected to produce sufficient seed for about 300,000 acres for fiber and at least 50,000 acres for seed in 1943. Plantings in 1943 are expected to be concentrated in Kentucky, Indiana, Illinois, Wisconsin, Minnesota, and Iowa. Since there are now only 5 hemp-processing mills in operation the larger acreage will require a marked expansion in plant facilities. Consequently as many as 71 additional mills may be built under a Government-financed program. They will be placed adjacent to planting areas to assure immediate processings once the hemp is harvested. The Requirements Committee of the War Production Board has already approved use of the needed materials for the construction of the mills in a ratio of one mill for each 4,000 acres of hemp. The Government is also financing a training program for mill managers who will

supervise the new mills when they are completed.

**F**LAX (for fiber) acreage increased sharply in 1942, advancing from about 11,500 acres in 1941 to about 18,000 to 19,000 acres this year. Prices are not much different than last season but they are well above earlier years. Although several new mills are now in operation, the normal production of flax in the straw expected from the 1942 acreage would likely be in excess of the normal capacity of existing plants to prepare the fiber from the straw. Exceptionally favorable yields such as last year and this have caused a rather tight mill situation. The outlook for flax supplies appears favorable since domestic production can be supplemented with imports.

**VEGETABLES** Truck crop production is expected to be somewhat smaller next year in view of anticipated shortages of labor, materials, and transportation facilities. Even if the acreage of fresh vegetables remains about the same in 1943 as it was in 1942, yields next season may be considerably smaller than the excellent yields of 1942.

**S**IGNIFICANT reductions in the acreage of some fresh vegetables are likely to occur, particularly in the Western States where labor and transportation shortages already have been experienced. Shortages of transportation facilities may influence shifts in fresh vegetable areas and determine to some extent the type of vegetables which will or will not be grown. Plantings of such crops as watermelons, cantaloups, cucumbers, lettuce, and celery are not likely to be as large as last year. Farmers are aware of the expected labor shortage for growing and harvesting crops and realize that transportation facilities may be difficult to obtain for bulky, highly-perishable vegetables which must be hauled long distances. Increased plantings are expected for

such crops as carrots, snap beans, onions, sweet corn, tomatoes, cabbage, and lima beans.

Purchasing power is expected to be greater in 1943 than it was in 1942. Moreover, the fact that there are price ceilings on most food products may divert purchasing power to commodities that are without a ceiling price. These factors together probably will expand greatly the demand for truck crops. This increased demand together with an expected decrease in production probably will cause truck crop prices to continue to rise in 1943 unless they are placed under price controls.

The outlook for processing vegetables is very uncertain because tin allocations for next year are still rather indefinite. Production of processing vegetables likely will be somewhat smaller than this year, even though there is no change in planted acreage because the generally favorable growing conditions of 1942 may not be repeated next season. Moreover, the supply of labor for harvesting and canning as well as the supply of transportation facilities probably will be limiting factors in 1943.

**U**NDER the stimulation of generally favorable prices for the 1942 potato crop and probable continuation of relatively high prices in 1943, it is likely that potato acreage in most States will be at least maintained and possibly increased in 1943. Yields have been high for the past 3 years and the 1942 yield is expected to set a record of about 135 bushels per acre, compared with 126 bushels for the 5-year average 1937-41. Average yields and an acreage equal to this year would not provide a supply of potatoes adequate to meet our needs. Under the influence of increased purchasing power and large Government requirements, demand for potatoes is expected to continue to increase in 1943. As a result of increased demand and the possibility of a potato crop only slightly larger than in 1942, there

will be a strong upward pressure on prices in 1943. However, potatoes have been placed under price ceilings.

**T**HE large supply of dry beans probably will be adequate to meet our needs and provide a carry-over greater than the average of recent years. Maintenance in 1943 of approximately the level of prices supported in 1942 by the Department of Agriculture's dry bean purchase program should be adequate to induce farmers to plant a substantially larger acreage than they planted in 1942.

The acreage of dry beans may increase by 15 to 20 percent over 1942. However, the favorable growing conditions and yields of 1942 may not prevail next year. Even though dry bean acreage is increased by 15 to 20 percent above 1942, only about 21 million bags would result if yields are about average next season. Most dry bean growers can expect to receive a fairly high price despite a succession of record dry bean crops.

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**FRUIT** In 1943, fruit growers in general will receive higher prices for their crop than the average prices they received in 1942. However, ceiling prices at the retail level have been temporarily established for citrus fruits, and they may be placed on some other fresh fruits during the next year.

**I**T is likely that the fruit crop in 1943-44 will be slightly smaller than the bumper crop in 1942-43. Since military and lend-lease requirements in 1943-44 will be substantially above those for the preceding years, the total amount of fruit on a fresh equivalent basis available for civilian consumers will be considerably less.

The decrease from 1942-43 in the total supply of fruits marketed fresh, probably will be greater than the decrease in total production. Although the quantity of fruit canned may be smaller than a year earlier because of tin plate restrictions, the quantity

dried is likely to be substantially increased. Therefore, the total quantity used for canning and drying will be larger than in 1942-43.

The War Production Board, through a recent order, acted to prevent the depletion of canned fruit and juice stocks before the 1943-44 pack comes on to the market. This order prohibits canners from shipping during certain periods more than a specified percentage of their packs available for civilian consumption. For instance, at least 30 percent of their total civilian supply cannot be shipped prior to April 1, 1943. Since the civilian demand for canned fruits this season at ceiling prices is greater than the supply available, there would have been little or no stocks available toward the end of the current season if inventory controls had not been instituted.

**T**HE orange and grapefruit crops that will be marketed from this fall to next may easily be the largest on record. On October 1 it was indicated that the production of oranges, excluding California Valencias, would total 58,600,000 boxes compared with 53,800,000 in 1941-42. The production of grapefruit, excluding California "other" varieties, was indicated to total 45,200,000 boxes compared with 38,700,000 in the preceding season. The demand for both of these fruits for processing will be exceptionally great since large quantities of concentrated orange juice are desired for lend-lease shipment, and the grapefruit juice pack may be of record size. Supplies of oranges and grapefruit for fresh sale will be large during the winter and spring of 1943.

Retail price ceilings have been established for fresh citrus fruits, excluding grapefruit, at the highest price prevailing from September 28 to October 2. Retail price ceilings of fresh grapefruit have been fixed in such a manner that they will average roughly 10 cents per grapefruit, or the retailer's

cost plus  $2\frac{1}{2}$  cents, whichever is lower. The 10 cent price for grapefruit represents the average price in localities in which grapefruit was sold between September 28 and October 2. During this period California was the only State shipping oranges and grapefruit, and orange and grapefruit prices were close to their seasonal peaks.

At this time it appears likely that the 1942-43 weighted average price received by growers for oranges and grapefruit (sold for fresh consumption and for processing) will be at least 15 percent and 5 percent higher respectively than the weighted average in 1941-42.

## TOBACCO

Prices for most types of tobacco will be higher for the 1942 crop than they were for the 1941 crop. Returns to farmers for flue-cured and Burley will be the highest on record and prices will be the highest since 1919. High prices for 1942 crop would lead farmers to plant much larger acreages next season if it were not for marketing quotas, the limited quantities of land and labor available, and the imperative need for increased production of strategically important food and fiber.

**T**HE indicated production of all tobacco in 1942 is more than 1.4 billion pounds, or nearly 13 percent more than in 1941. Farmers are expected to harvest 808 million pounds of flue-cured and 347 million pounds of Burley compared with 650 million and 338 million pounds, respectively, last year. The production of Maryland will be larger, but smaller quantities of dark types and cigar tobaccos have been grown.

Notwithstanding increased production of the most important kinds of leaf, the consumption of tobacco products is rising and stocks of most types of leaf will be smaller at the beginning of next season. Tax-paid

withdrawals of cigarettes, cigars, and snuff in the fiscal year 1941-42 were 14 percent, 7 percent and 8 percent respectively above the corresponding period a year earlier. Withdrawals of cigarettes continue to increase and the manufacture and consumption of them will establish a new record high this year. The production and consumption of cigarettes are coming to exceed tax-paid withdrawals by a widening margin due to the increasing manufacture of tax-free cigarettes for use by men in the armed services outside of the United States. Contrary to previously prevailing trends, the use of chewing tobacco and snuff has been increasing during the war. This probably is the result of the fact that more and more people are working under conditions which do not permit smoking.

**P**RICES for flue-cured leaf sold so far this season have averaged more than 38 cents per pound. Flue-cured prices have been under a ceiling since August 31, but prices have continued strong within the limits permitted by the ceilings. The sharpest price increases as compared with previous years have been in the lower grades. Ceiling restrictions do not apply to purchases made from funds of the Commodity Credit Corporation. Purchases with these funds are expected to total more than 200 million pounds from the 1942 crop.

Lend-lease shipments of flue-cured tobacco are continuing in considerable volume. Between April 1, 1941 (when lend-lease was applied to tobacco) and September 11, 1942, nearly 260 million pounds on a farm weight basis were shipped or delivered for shipment. Almost all of the tobacco acquired by Commodity Credit from the 1939 crop, half of the purchases from the 1940 crop and one-tenth from the 1941 crop have been shipped under lend-lease arrangements.

## Home-Grown Nitrogen

**N**ITROGENOUS fertilizers are becoming scarce. Boats that once brought in supplies of nitrate of soda from Chile are now needed elsewhere. Much inorganic nitrogen that once stimulated the growth of cotton, corn, tobacco, vegetables, and other crops is being made into explosives. No one can say at this time just how short our supplies of nitrogen for agriculture will be in 1943. But already plans are being made to restrict its use, especially in less essential lines.

In past years, farmers did not worry much about shortages of fertilizer. In general, they did not make full use of home-produced manures, unfed roughages, cover crops, and summer legumes. But in 1943 they must be prepared to counteract losses of nitrogenous fertilizers with legumes, farm manures, crop rotations, and all of the experience and ingenuity of American dirt farmers. Minimum requirements of nitrogen for agriculture in the United States in 1943 are estimated at 426,000 tons. This is about equivalent to the nitrogen which would be furnished by 2.5 million tons of nitrate of soda.

**S**INCE most of the nitrogenous fertilizer is used in sections of the country where livestock are not of great commercial importance, farm manures can be used as a replacement to only a limited extent. In the principal nitrogen-consuming areas, however, summer and winter legumes are not only feasible but their acreages are increasing each year. In 1943 legumes will be needed more than ever before, although further changes to fit them into cropping systems will not be easy. Shortages of labor, seeds, and land for these soil-building crops will make their use difficult, especially now when there is a strong incentive to grow cash crops. Furthermore, legumes cannot be used as a source of nitrogen for some crops, such as certain types of

tobacco, whose quality is materially reduced if they are grown directly following a legume crop.

In 1941 about 3 million acres were planted to winter legumes. It is likely that the 1942 fall planting has been substantially larger. Winter legumes ordinarily add to the soil about 25 pounds of nitrogen per acre, so a 2-million acre increase in legumes would save the equivalent of the nitrogen in 150,000 tons of nitrate of soda. Winter legumes also contribute in several other ways to soil improvement. They reduce soil erosion, add humus, and conserve plant food by reducing losses through leaching. Use of summer legumes especially for interplanting with corn, has already become common as a means of soil building, and further increase in such acreage next year will make a still greater addition to nitrogen supplies for 1944 crops. To grow these legumes satisfactorily, three things are necessary: applications of phosphates, inoculation and early seeding.

**T**OTAL production of animal manures in 1940 was probably about 950 million tons. Of this quantity, around 250 million tons—or about one-fourth of the production—was hauled from barns and feedlots, and applied principally to cropland. In 1943, total production of manure will exceed the 1940 figure by about 80 million tons. On the average, 30 tons of farm manure contain as much nitrogen as 1 ton of nitrate of soda. This means that in 1943 there will be an equivalent of about 34 million tons of nitrate of soda in total manures produced, exceeding the quantity produced in 1940 by an equivalent of 2.7 million tons of nitrate of soda. Since about a fourth of all manure produced is used on cropland, this increase will replace in part the dwindling agricultural supplies of nitrate of soda.

It is known that the fertilizing value of manure increases as livestock are fed more concentrates. More concentrates than usual can be fed in the 1942-43 feeding season. The combined production in 1942 of vegetable protein concentrates, chiefly soybean, cottonseed, peanut, and linseed meal, will be about 2 million tons above the previous high production of 1941. This additional 2 million tons will contain about as much nitrogen as 800,000 tons of nitrate of soda. Under ordinary conditions, more than one-half of this nitrogen can be recovered from manures after the concentrates have been fed to livestock, although losses in care and handling of the manure tend to lower the actual amount that is recovered.

Some question exists, of course, as to whether all of the large supply of protein feeds available from the 1942 crops will be fed to animals. Although favorable prices for livestock and livestock products promise to stimulate feeding of protein concentrates, the supply is so large that even after making allowance for some increase in the number of animals there will still be more than 25 percent more protein concentrates for each animal on farms than in 1942. Because of this, farmers may use some of the large supply of the oilseed meals directly for fertilizer, although nitrogen from this source would probably cost twice as much as inorganic nitrogen. Organic nitrogen is less soluble and slower acting than inorganic nitrogen. For good results from most crops, not more than one-third to one-half of the total nitrogen should be supplied from organic sources.

**T**HE South Atlantic and South Central States taken together use about two-thirds of the Nation's commercial fertilizer, including mixed fertilizers and nitrate of soda for top dressing and for side application to cotton and other crops. Since livestock numbers in these regions are relatively small

and cattle feeding for market is not generally practiced, the increase in farm-manure production expected in 1942-43 will be very small in relation to the nitrogen needs of these regions. Practically every acre of corn in the Southeastern States, and in the eastern areas of the South Central States, could well be interplanted with legumes such as cowpeas, soybeans, and velvet beans, while legumes in meadows and pastures can store up plant food and humus that frequently will raise corn yields from 15 bushels per acre to well over 25 bushels.

In most other sections of the country, manure supplies are the principal replacement for nitrogenous fertilizers. The Middle Atlantic and East North Central areas each utilize about 11 percent of the United States total tonnage of commercial fertilizers. True, farmers in these States have large numbers of dairy cattle, beef cattle, and hogs, and will find it both feasible and profitable to obtain more of their nitrogen requirements by heavier feeding of protein concentrates and wise conservation and application of manures. But some crop specialty farmers who use large quantities of fertilizer do not have enough livestock to supply any significant amount of fertilizer.

The West North Central States use only about 2 percent of the Nation's commercial fertilizer but in 1943 will produce more than half of the increase of 80 million tons of manure. Hence, replacement of nitrogenous fertilizer in this region should present no great problem. In New England, where a little more than 4 percent of the commercial fertilizer is used, increased feeding of dairy cattle is also increasing the supply of manure for fertilizer. In this area the large number of dairy cattle and the small amount of tilled crop acreage usually result in a greater use of manure per acre of cropland than in any other region.

—M. R. COOPER and A. P. BRODELL

## Economic Trends Affecting Agriculture

Year and month	Industrial production (1935-39=100) <sup>1</sup>	Income of industrial workers (1935-39=100) <sup>2</sup>	Cost of living (1935-39=100) <sup>3</sup>	Wholesale prices of commodities <sup>4</sup>	Prices paid by farmers for commodities used in—			Prices paid, interest, and taxes	Farm wage rates
					Living	Production	Living and production		
1925	90	126	125	151	163	147	156	170	176
1926	96	131	126	146	162	146	155	168	179
1927	95	128	124	139	160	144	153	166	179
1928	99	127	123	141	160	148	155	168	179
1929	110	134	122	139	159	147	154	167	180
1930	91	110	119	126	150	141	146	160	167
1931	75	85	109	107	128	123	126	140	130
1932	58	59	98	95	108	109	108	122	96
1933	69	61	92	96	108	108	108	118	85
1934	75	76	96	109	122	123	122	128	95
1935	87	87	98	117	124	127	125	130	103
1936	103	100	99	118	123	125	124	128	111
1937	113	117	103	126	128	136	131	134	126
1938	89	91	101	115	122	125	123	127	125
1939	108	105	99	113	120	122	121	125	123
1940	123	119	100	115	121	124	122	126	126
1941	156	163	105	127	131	131	131	134	154
1941—October	<sup>1</sup> 164	<sup>1</sup> 179	109	135	140	138	139	141	165
November	166	180	110	135	142	139	141	143	—
December	<sup>1</sup> 168	187	110	137	143	141	142	143	—
1942—January	<sup>1</sup> 172	196	112	140	146	145	146	146	166
February	<sup>1</sup> 172	194	113	141	147	147	147	147	—
March	171	195	114	142	150	149	150	150	167
April	<sup>1</sup> 173	<sup>1</sup> 203	115	144	152	149	151	151	177
May	<sup>1</sup> 172	<sup>1</sup> 209	116	144	153	150	152	152	—
June	176	<sup>1</sup> 216	116	144	154	150	152	152	183
July	180	<sup>1</sup> 229	118	144	154	150	152	152	202
August	183	233	117	145	<sup>1</sup> 155	150	<sup>1</sup> 153	152	—
September	185	236	118	145	<sup>1</sup> 157	<sup>1</sup> 151	<sup>1</sup> 154	<sup>1</sup> 153	—
October					158	151	155	154	220

Year and month	Index of prices received by farmers (August 1909–July 1941=100)							Ratio, prices received to prices paid, interest, and taxes
	Grains	Cotton and cotton-seed	Fruits	Truck crops	Meat animals <sup>5</sup>	Dairy products	Chickens and eggs	
1925	157	177	172	153	141	153	163	92
1926	131	122	138	143	147	152	159	86
1927	128	128	144	121	140	155	144	84
1928	130	152	176	159	151	158	153	89
1929	120	144	141	149	156	157	162	87
1930	100	102	162	140	134	137	129	79
1931	63	63	98	117	92	108	100	67
1932	44	47	82	102	63	83	82	53
1933	62	64	74	105	60	82	75	59
1934	93	99	100	103	68	95	89	70
1935	103	101	91	125	117	108	117	83
1936	108	100	100	111	119	119	115	89
1937	126	95	122	123	132	124	111	90
1938	74	70	73	101	114	109	108	75
1939	72	73	77	105	110	104	94	74
1940	85	81	79	114	108	113	96	78
1941	96	113	92	144	144	131	122	91
1941—October	101	144	107	<sup>1</sup> 161	154	145	146	99
November	103	136	98	147	149	148	157	94
December	112	138	98	156	157	148	153	100
1942—January	119	143	102	204	164	148	147	102
February	121	150	98	161	173	147	135	99
March	122	151	111	136	180	144	130	97
April	120	158	118	158	190	142	131	99
May	120	159	131	152	189	143	134	100
June	116	153	148	169	191	141	137	99
July	115	155	131	200	193	144	145	101
August	115	151	126	256	200	151	156	107
September	119	156	125	251	195	156	166	107
October	117	158	128	226	200	165	173	110

<sup>1</sup> Federal Reserve Board, adjusted for seasonal variation. Revised September 1941.<sup>2</sup> Total income, adjusted for seasonal variation. Revised November 1941. <sup>3</sup> Bureau of Labor Statistics.<sup>4</sup> Bureau of Labor Statistics index with 1926=100, divided by its 1910-14 average of 68.5. <sup>5</sup> Revised.

NOTE.—The index numbers of industrial production and of industrial workers' income shown above are not comparable in several respects. The production index includes only mining and manufacturing, the income index also includes transportation. The production index is based on volume only, whereas the income index is affected by wage rates as well as by time worked. There is usually a time lag between changes in volume of production and workers' income, since output can be increased or decreased to some extent without much change in the number of workers.